Instructions/Parts

ExactaBlend™ AGP Air Motor

333007A
EN

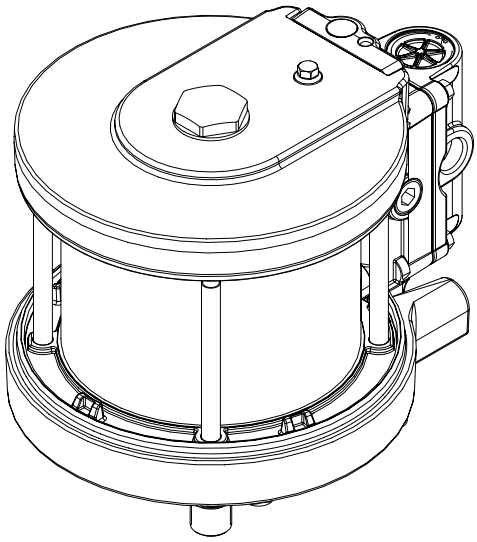
For use with ExactaBlend AGP U100 systems. For professional use only. Not approved for use in European explosive atmosphere locations.

24T884

Series A
Displacement. . . . . 700 cc
Stroke. . . . . 1.5 in.
Piston Diameter . . . . 6.0 in. (152 mm)

100 psi (0.7 MPA, 7.0 bar) Maximum Working Pressure

Important Safety Instructions
Read all warnings and instructions in this manual. Save all instructions.



PROVEN QUALITY. LEADING TECHNOLOGY.

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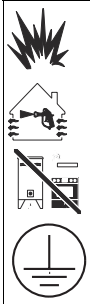
Related Manuals

Manual	Description
3A2894	ExactaBlend AGP Advanced Glazing Proportioner, Setup-Operation
332452	ExactaBlend AGP Advanced Glazing Proportioner, Parts

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

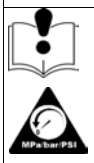
⚠WARNING



FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock**.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

⚠WARNING

SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer

Component Identification

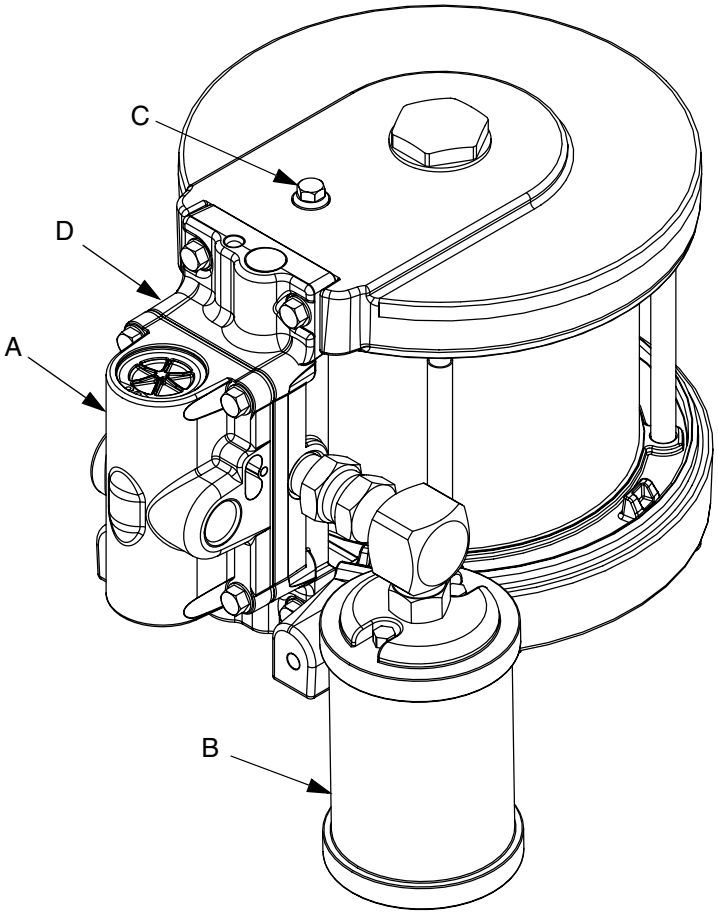
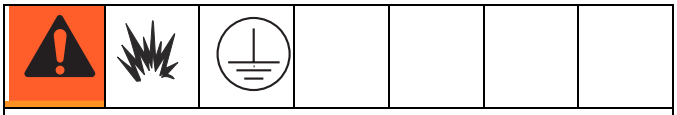


FIG. 1: NXT Air Motor components

Key:

A Air valve
B Muffler
C Pilot valve
D Manifold

Grounding



The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

See FIG. 2. Verify that the ground screw (GS) is attached and tightened securely to the air motor. Connect the other end of the ground wire (U) to a true earth ground.

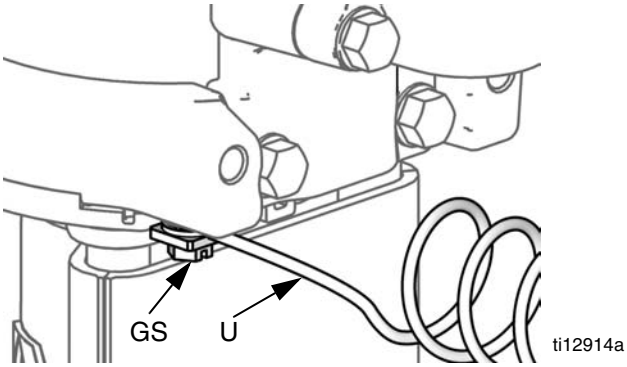
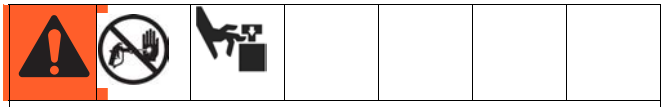


FIG. 2: Ground wire

Troubleshooting



Relieve the pressure before checking or servicing the equipment.

NOTICE

Check all possible problems and causes before disassembling the pump.

Problem	Cause	Solution
Air motor will not run.	Damaged air valve (17).	Replace or service air valve (17). See page 8.
	Damaged pilot valve (19).	Replace pilot valves (19). See page 11.
Air continuously exhausting around air motor piston rod.	Damaged u-cups (3, 43).	Replace piston rod u-cups (3, 43). See page 11.
Air continuously exhausting from muffler.	Damaged air valve plate (105) or cup (112).	Replace or service air valve (17). See page 8.
Air motor “bounces” at top of stroke.	Damaged bottom pilot valve.	Replace bottom pilot valve (19). See page 11.
Air motor “bounces” at bottom of stroke.	Damaged top pilot valve.	Replace top pilot valve (19). See page 11.
Icing inside motor.	Air motor operating at high pressure or high cycle rate.	Reduce pressure, cycle rate, or duty cycle of motor. Reduce dew point of compressed air in moisture coalescing filter.

Repair

Repair Air Valve

Replace Complete Air Valve

1. Stop the pump at the middle of its stroke. Relieve the pressure. Perform **Pressure Relief Procedure** within the ExactaBlend AGP Advanced Glazing Proportioner, Setup-Operation manual.
2. Disconnect the air line to the motor.
3. Remove screws (18). Remove the air valve (17) and gasket (16*◆).
4. To repair the air valve, go to **Disassemble the Air Valve,** page 8. To install a replacement air valve, continue with step 5.
5. Align the new air valve gasket (16*◆) on the manifold, then attach the air valve (17).
6. Reconnect the air line to the motor.

Replace Seals or Rebuild Air Valve

Air Valve Seal Kits are available. See page 18 to order the correct kit for your pump. Parts are marked †.

Air Valve Repair Kits are available. See page 18 to order the correct kit for your pump. Parts are marked ◆.

Air Valve End Cap Kits are available. See page 18 to order the correct kit for your pump. Parts are marked ✠.

Disassemble the Air Valve

1. Perform steps 1-3 under **Replace Complete Air Valve,** page 8.
2. See FIG. 3. Use a 2 mm or 5/64 hex key to remove two screws (109†◆). Remove the valve plate (105◆).
3. Remove the two-piece cup assembly (◆112a, b, and c), and spring (111◆).

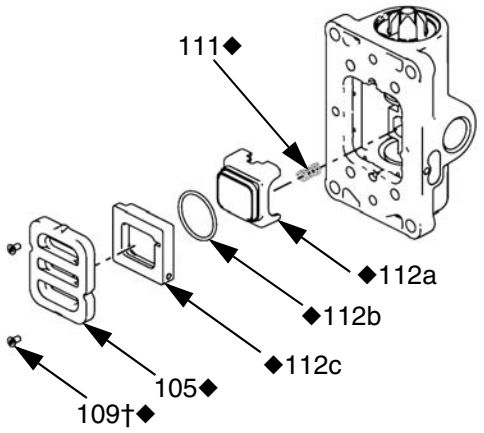


FIG. 3: Air plate removal

4. Remove the snap ring (110◆✠) from each end. Use the piston to push the end caps (107✠) out of the ends. Remove end cap o-rings (106†✠◆).
5. Remove the piston (102◆). Remove the u-cup seals (108†◆) from each end and the detent assembly (103◆) and detent cam (104◆) from the center.

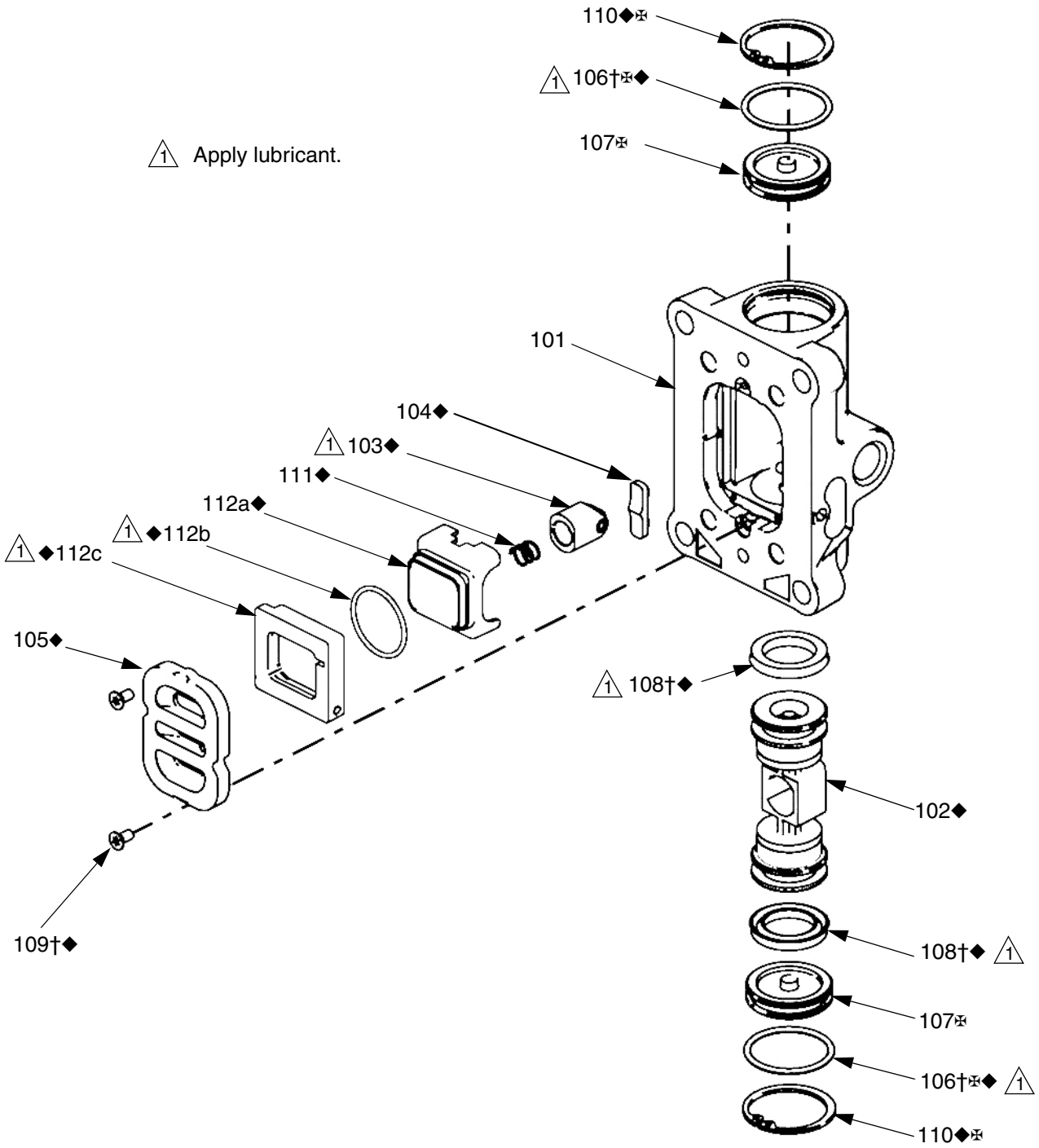


FIG. 4: Air valve assembly

Reassemble the Air Valve

1. Lubricate detent cam (104◆) and install into housing.
2. Lubricate the u-cups (108†◆) and install on the piston (102◆) with lips facing toward the center of the piston.

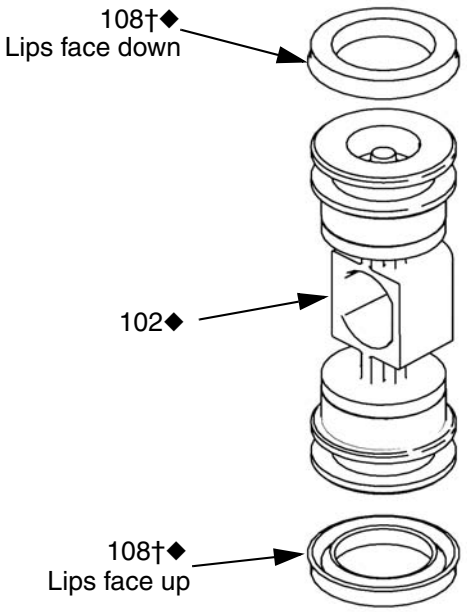


FIG. 5: Air valve u-cup installation

3. Lubricate both ends of the piston (102◆) and install it in the housing.
4. Lubricate and install the detent assembly (103◆) into the piston.
5. Lubricate new o-rings (106†✠◆) and install on the end caps (107✠). Install the end caps into the housing.
6. Install a snap ring (110◆✠) on each end to hold end caps in place.
7. Install the spring (111◆).
8. Lubricate and install the cup o-ring (◆112b) on the cup body (◆112a), then assemble the cup body to the cup base (◆112c). Lubricate and install the cup assembly. Align the small round magnet with the air inlet.

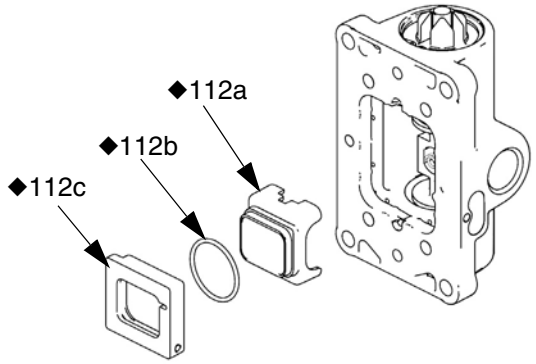
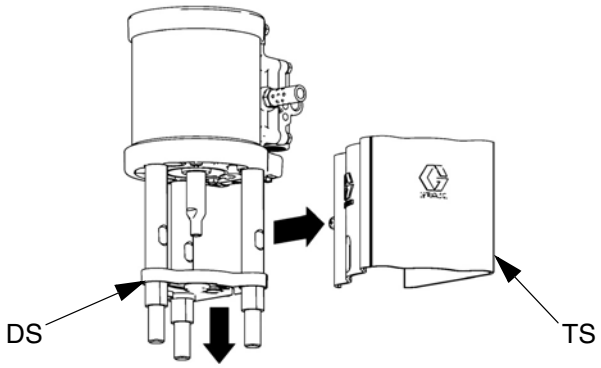


FIG. 6: Two-piece cup installation

9. Install the valve plate (105◆). Tighten the screws (109†◆) to hold it in place.

Replace Pilot Valves

1. Stop the pump at the middle of its stroke. Relieve the pressure. Perform **Pressure Relief Procedure** within the ExactaBlend AGP Advanced Glazing Proportioner, Setup-Operation manual.
2. Disconnect the air line to the motor.
3. Remove the tie rod shield (TS). Slide the drip shield (DS) down on the tie rods.



4. Use a 10 mm socket wrench to remove the old pilot valves (19) from the top and bottom covers.
5. Lubricate and install the new pilot valves (19). Torque to 95-105 in-lb (11-12 N•m).

Repair Air Motor

NOTE: Air Motor Seal Kits are available. See page 18 for the correct kit for your motor. Parts included in the kit are marked with an asterisk (*). For best results, use all the parts in the kit.

Disconnect the Air Motor

1. Flush the pump, if possible. Relieve the pressure. Perform **Pressure Relief Procedure** within the ExactaBlend AGP Advanced Glazing Proportioner, Setup-Operation manual.
2. Disconnect the air and fluid hoses, the ground wire, and the tie rod shield.
3. Remove the retaining spring and pin (P).

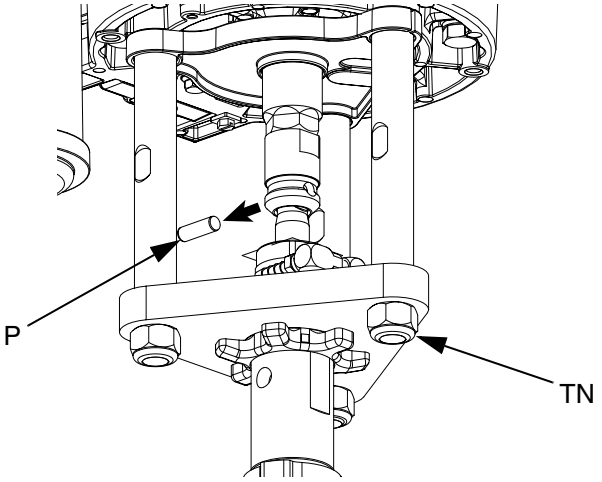


FIG. 7: Pin removal

4. Remove the tie rod nuts (TN).

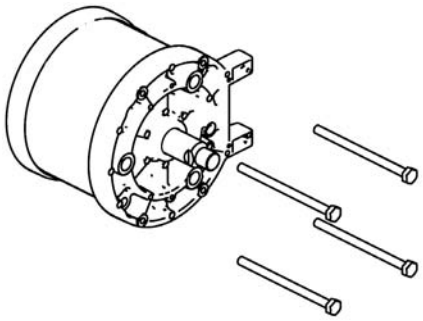
NOTICE

The pump lower will no longer be attached to the motor once all the tie rod nuts are removed. To avoid damage that may be caused from falling, hold the pump lower during the removal of the tie rod nuts.

5. Use a socket to remove the mounting screws.
6. Remove the air motor. The tie rods and drip shield will remain attached.

Disassemble the Air Motor

1. Use a 10 mm socket wrench to remove four screws (18). Remove the air valve (17) and gasket (16*◆).
2. Remove the muffler.
3. Remove four screws (18) and remove the manifold (15*) and two gaskets (14*).
4. Use a 10 mm socket wrench to remove the pilot valves (19) from the top and bottom cover.
5. Remove the 17 mm tie bolts.



6. Remove the top cover. Remove the o-ring (9*).
7. Remove the cylinder (11).
8. Depending on your displacement pump model, you may need to remove an adapter from the bottom of the piston assembly.
9. Slide the piston assembly (5) straight up off the bottom cover.

NOTICE

Do not attempt to take apart the piston assembly (5).

10. Remove o-ring (8*) from around the piston.
11. Remove u-cup seals (3*, 43*), and o-ring (9*) from the bottom cover.

Reassemble the Air Motor

NOTE: For easier reassembly, start with the top cover (13) turned over on the workbench and assemble the air motor upside-down.

1. Lubricate and install the o-ring (9*) on the top cover (13).
2. Lubricate the inside of the cylinder (11). Lower the cylinder (11) onto the top cover (13).
3. Lubricate and install the o-ring (8*) around the piston (5).
4. Slide the piston assembly (5) down into the cylinder (11). Be sure the o-ring (9*) stays in place.
5. See FIG. 8. Lubricate and install new u-cup seal with flange (43*) in the bottom of the bearing in the bottom cover (1). The u-cup must face up and the flange must face down. Lubricate and install new u-cup seal (3*) in the top of the bearing. Lips must face up.

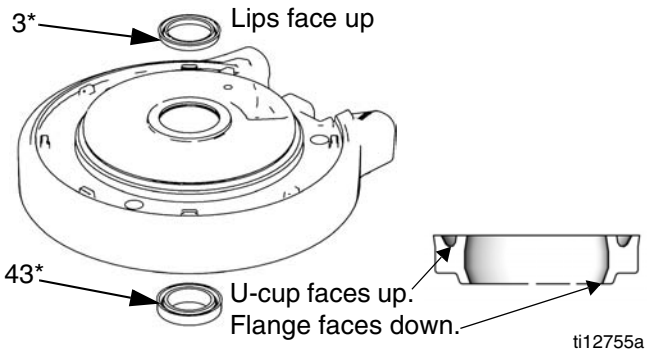


FIG. 8: Air motor u-cup installation

6. Lubricate and install the o-ring (9*) on the bottom cover (1).
7. Install the piston bumper (28) on the bottom cover (1).

8. See FIG. 9. Carefully place the bottom cover (1) on the cylinder (11), sliding the rod through the bearing. The manifold surfaces of the top and bottom covers must align.

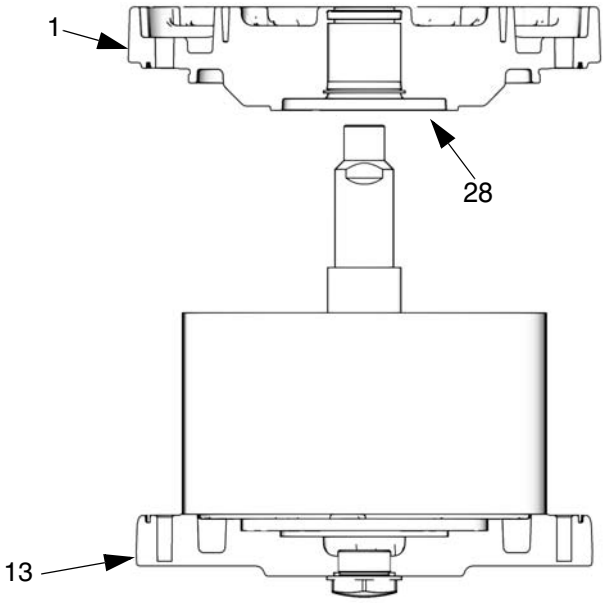


FIG. 9: Bottom cover install

9. Install the tie bolts (10) hand tight.

10. Install two gaskets (14*) on the manifold (15). Install the manifold (15). Torque bolts to 95-105 in-lb (10.7-11.9 N•m).

NOTE: The manifold is reversible for ease of placement of muffler or remote exhaust.

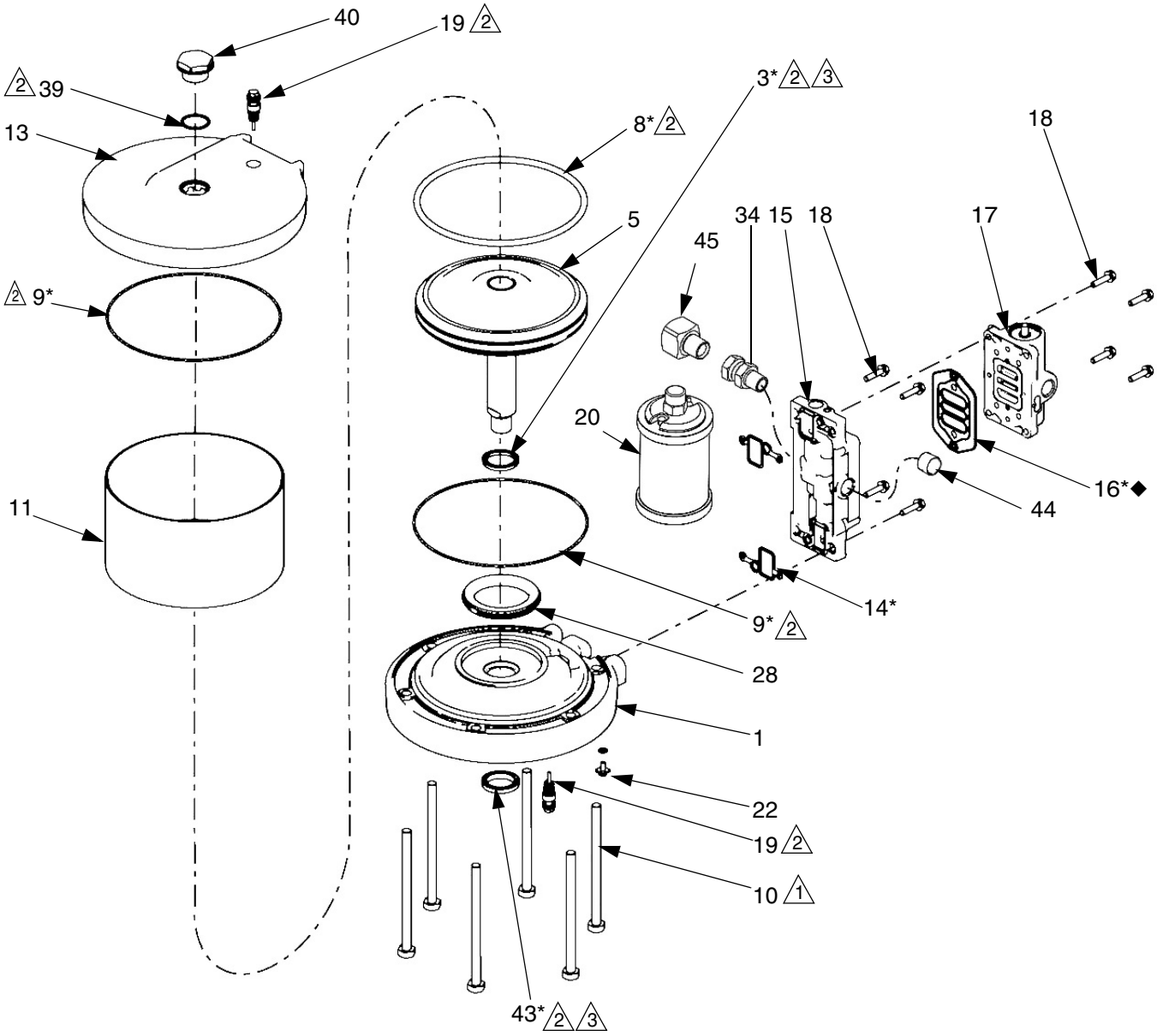
11. Align the air valve gasket (16*◆) on the manifold, then attach the air valve.

12. Tighten the tie bolts (10) halfway. Work in a criss-cross pattern. Continue tightening the bolts in pattern to 25-30 ft-lb (34-40 N•m).

13. Lubricate and install pilot valves (19) in top and bottom cover. Torque to 95-105 in-lb (11-12 N•m).

14. Reinstall muffler.

Parts



1 Torque to 25-30 ft-lb (34-40 N•m).

2 Apply lubricant.

3 U-cup faces up. Flange (bottom seal only) faces down. See FIG. 8, page 12.

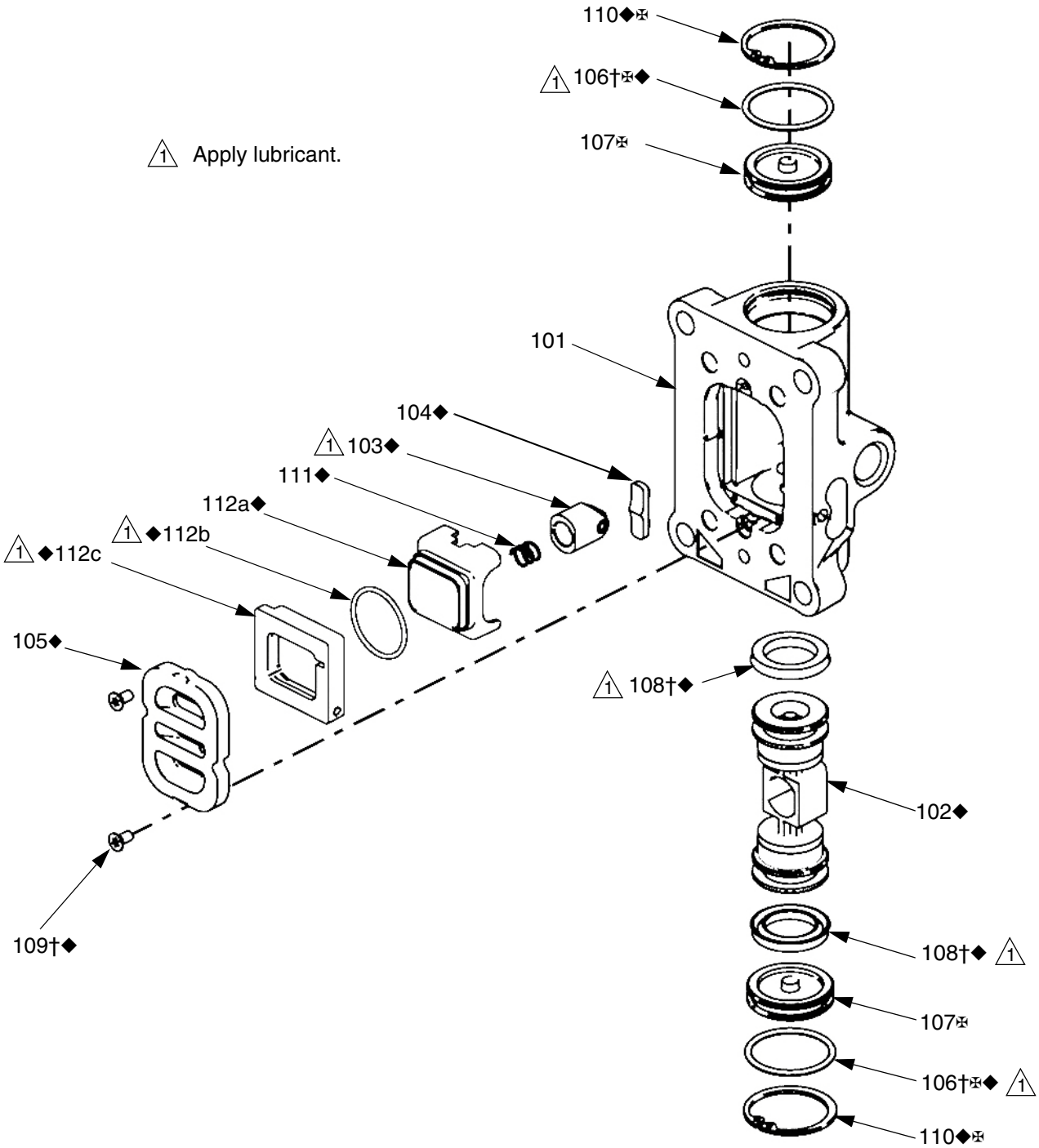
Air Motor Parts

Ref.	Part Number	Description	Qty
1	24A549	COVER, lower, assembly (includes 3, 9, 19, 22, 28, and 43)	1
3*	Not sold separately. See Air Motor Seal Kit (page 18) or Lower Cover Assembly (1, this table)	U-CUP	2
5	16W626	PISTON, motor, assembly	1
8*	Not sold separately. See Air Motor Seal Kit (page 18) or Piston Assembly (5, this table)	O-RING, piston	1
9*	Not sold separately. See Air Motor Seal Kit (page 18) or Lower Cover Assembly (1, this table) or Upper Cover Assembly (13, this table)	O-RING, cover	2
10	15M316	BOLT, tie, hex head	4
11	24T883	CYLINDER, motor	1
13	15X354	COVER, upper, assembly, includes 9, 19, 39, 40, and 41	1
14*	Not sold separately. See Air Motor Seal Kit (page 18) or Manifold Assembly (15, this table)	GASKET, manifold	2
15	24A580	MANIFOLD, assembly, includes 14, 16, and 18 (qty. 4)	1
16*◆	Not sold separately. See Air Motor Seal Kit (page 18) or Manifold Assembly (15, this table)	GASKET, air valve	1
17	24A352	VALVE, air	1
18	Not sold separately. See Manifold Assembly (15, this table)	SCREW, M6 x 25	8
19	24A366	VALVE, pilot	2
20	117237	MUFFLER	1
22	116343	SCREW, ground	1
28	24A914	BUMPER KIT, includes lower bumper, and upper bumper	1
34	190451	UNION, adapter	1
35▲	15W719	LABEL, warning (not shown)	
39	Not sold separately. See Upper Cover Assembly (13, this table), OR Plug (40)	O-RING, upper cover plug	1
40	24E990	PLUG, upper cover	1
43	Not sold separately. See Air Motor Seal Kit (page 18) or Lower Cover Assembly (1, this table)	SEAL, u-cup with flange	1
44	100361	PLUG, pipe	1
45	115764	FITTING, elbow, 90	1

* *Included in Air Motor Seal Kit. See page 18.*

▲ *Replacement Warning labels, signs, tags, and cards are available at no cost.*

Air Valve Parts



Air valve parts are not sold individually. The table below shows possible kit options for each part. See page 18 to order the correct kit(s), or full replacement air valves, for your motor.

Ref.	Description	Qty.	Air Valve Repair Kit	Air Valve Seal Kit	Air Valve End Cap Kit	Other
101	HOUSING	1				
102◆	AIR VALVE PISTON	1	✔			
103◆	DETENT PISTON ASSEMBLY	1	✔			
104◆	DETENT CAM	1	✔			
105◆	PLATE, air valve	1	✔			
106†✠◆	O-RING	2	✔	✔	✔	
107✠	CAP, standard	2			✔	
108†◆	U-CUP	2	✔	✔		
109†◆	SCREW	2	✔	✔		Screws Kit 24A359 (pack of 10)
110◆✠	SNAP RING	2	✔		✔	
111◆	DETENT SPRING	1	✔			
112a◆ 112b◆ 112c◆	TWO-PIECE CUP ASSEMBLY, with o-ring	1	✔			
18	SCREW, M6 x 25	4				See Manifold Assembly (15, Air Motor Parts table) or Solenoid Assembly (25, Air Motor Parts table)
16*†◆	AIR VALVE GASKET	1	✔	✔		See Air Motor Seal Kit (page 18) or Manifold Assembly (15, Air Motor Parts table

† Included in Air Valve Seal Kit. See page 18.

◆ *Included in Air Valve Repair Kit. See page 18.*

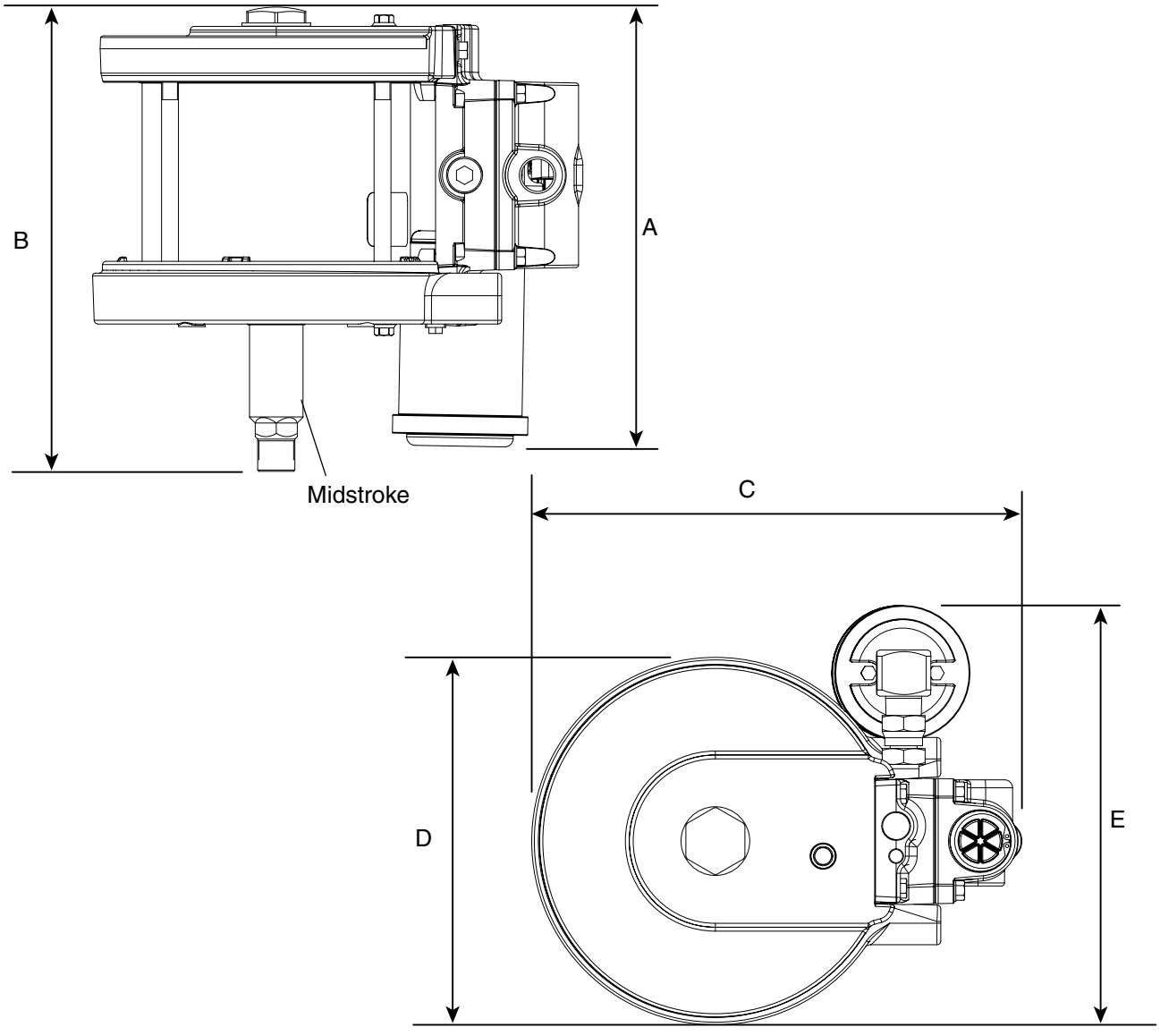
✠*Included in Air Valve End Cap Kit. See page 18.*

Kits and Accessories

Kit Description	Part Number
Complete Air Valve Replacement Kit – Standard	24A352
*** Air Motor Seal Kit**	24A547
◆ Air Valve Repair Kit	24A538
† Air Valve Seal Kit	24A536
✠ Air Valve End Cap Kit – Standard	24A361
Screws Kit — Includes ten screws (109)	24A359

Dimensions

A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	Weight lb (kg)
7.7 (261)	10.8 (274)	11.4 (290)	8.6 (218)	9.8 (249)	24 (10.9)



Technical Data

Maximum air inlet pressure	100 psi (0.7 MPa, 7.0 bar)
Stroke length	1.5 in.
Air inlet size	1/2 in.
Maximum motor speed (Do not exceed maximum recommended speed of fluid pump, to prevent premature pump wear.)	60 cycles per minute
Sound data	
Sound power*	80.1 dBA
Sound pressure**	70.2 dBA

** Sound power at 70 psi (0.48 MPa, 4.8 bar), 20 cpm. Sound power measured per ISO-9614-2.*

*** Sound pressure was tested 3.28 feet (1 m) from equipment.*

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.
Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.

Original instructions. *This manual contains English. MM 333007*

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